



**FEDERATION FRANÇAISE DE PARACHUTISME**

62 rue de Fécamp - 75012 PARIS

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**TECHNICAL AND PEDAGOGICAL COMMITTEE  
SAFETY NOTE N° 162**

Réf.: JMS/08/

Date: October 22, 2008

issued by: Eric Fradet

**Object:**

To decrease the of risk entanglement between the main side flaps and the main suspension lines.

Modification of main side flap stiffener attachment.



**Related rigs:**

All harness/containers whose main side flap ends are made with a sharp 90° angle and/or a stiffener with a sharp 90° angle.

**IDENTIFICATION OF RELATED HARNESS/CONTAINERS:**

All Javelin rigs and Javelin odyssey rigs

most of Vortex rigs,

some Advance rigs

some Atom rigs



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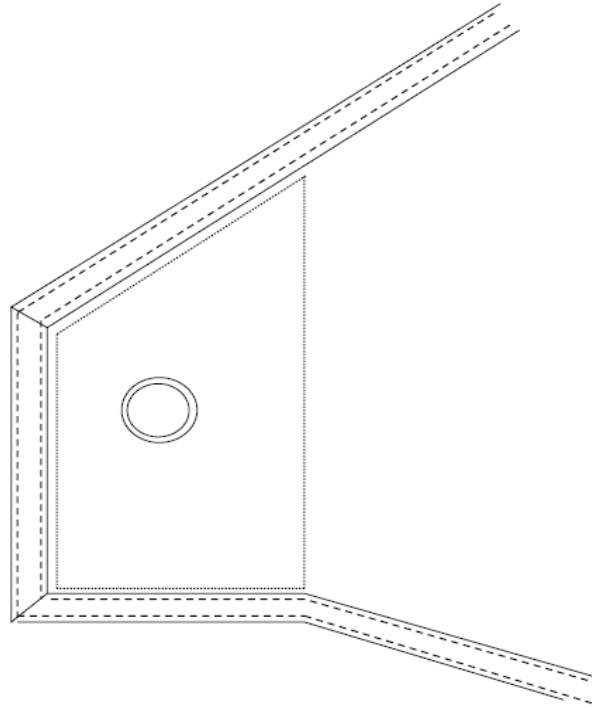
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**END OF MAIN  
SIDE FLAP  
WITH A SHARP  
90° ANGLE**



Example :



**Text:**

The technical adviser has been alerted to the risk for entanglement between the main side flaps and lines as a result of a fatality in the US and two major incidents in France. The containers of a number of different manufactures have been implicated.



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Analysis has shown some similarities between these incidents and indicates that a number of factors occurring together are required to explain how the main side flap can become entangled with the lines.

Factors affecting the likelihood of this entanglement arising can be divided into 3 areas.

1. Packing
2. Container Design
3. Body Position on Opening.

Packing:

- a. Using the wrong size of rubber bands which do not hold the line stows firmly enough.
- b. Using old rubber bands which do not hold the line stows firmly enough.
- c. Excess brake line left unstowed.
- d. Too much line left unstowed.
- e. Lines wrongly stowed in the pack tray.
- f. Wrong method of placing the bag into the main container.

Container Design.

- a. The shape of some side flap ends helping the lines to interfere and entangle with the side flaps when they come into contact.
- b. Main side flap stiffeners wearing through the fabric covering them.

Body Position on Opening:

- a. Opening with an unlevel body position.

Concerned Containers

All Javelins and Javelin odysseys, most Vortex containers, some Advance and some Atom containers, show main side flap ends with a sharp 90° angle.

Users are informed that there is an inherent risk with this shape of side flap, of it becoming entangled with lines because they do not encourage lines to slide towards the middle of the main container when they come into contact with them.

Some manufacturers have already changed the shape of the ends of their side flaps making them more rounded or making them slope up toward the end, (Parachutes de France) and others have been requested to do so, (Sunpath, Parachute Systems).

### **ACTION :**

The technical adviser asks for the application of the following measures.

### **MODIFICATIONS :**

- **Mandatory** before the next jump for all containers where the fabric is showing signs of wear at the inner edge of the stiffener.
- **Highly recommended** for all containers whose side flaps end with a sharp 90° angle, whatever the condition of the overlying fabric.

There are two different types of construction.

**Type 1** - The edge of the stiffener is NOT sewn into the binding tape

**Type 2** - The edge of the stiffener IS sewn into the binding tape

There are two modification methods.

**Mod 1** - can be used with type 1 and type 2 construction.

**Mod 2** - be used with type 1 and type 2 construction.

- must be used with all containers showing signs of wear at the inner edge of the stiffener.



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**Necessary tools and materials:**

Type 12 webbing **only must be used**

Scissors – Unpicker

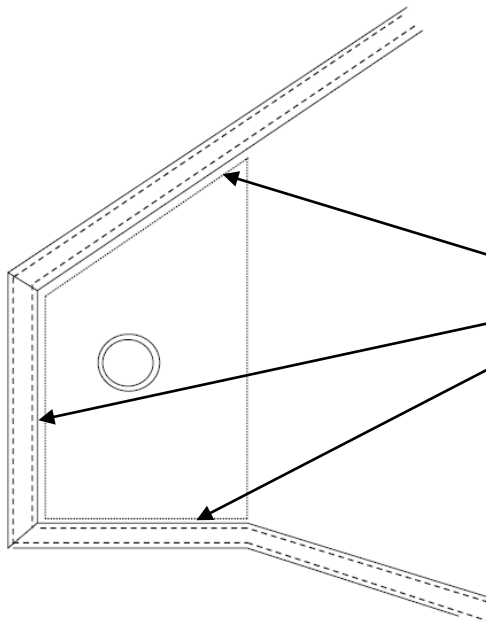
E thread

Ruler

Pen or pencil for marking

Straight stitch sewing machine for the first method of modification

Straight stitch sewing machine and zig-zag sewing machine or bartacker for the second modification method.



First modification method for the following construction type:  
Edges of the stiffener shown in dotted lines are not sewn inside the side flap binding tape shown in indents lines.



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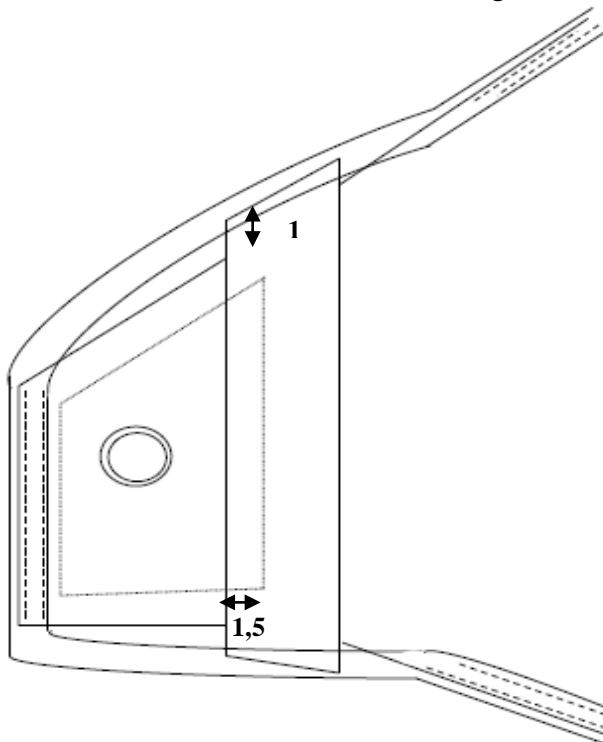
**Modification method 1:**

Remove the stitching from the binding tape for about 40-50 mm (about 2 ") either side of the inner edge of the main side flap stiffener.

Mark a line on the inside of the flap, about 13 mm or half inch outboard of the inside edge of main side flap stiffener.

Place a piece of **type 12** webbing on the inside of the flap, so that it overlaps the inner edge of the stiffener by about 1,5 cm (5/8").

With a straight sewing machine, sew round type12 webbing 2mm (1/16") in from its edges and on its ends 2-4mm in from the edge of the container fabric.







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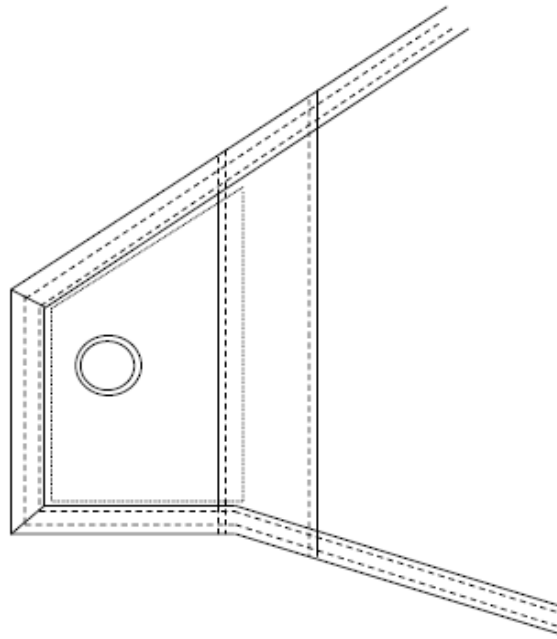
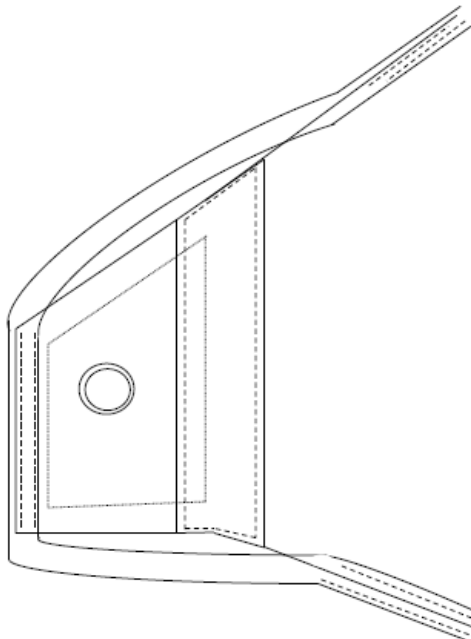
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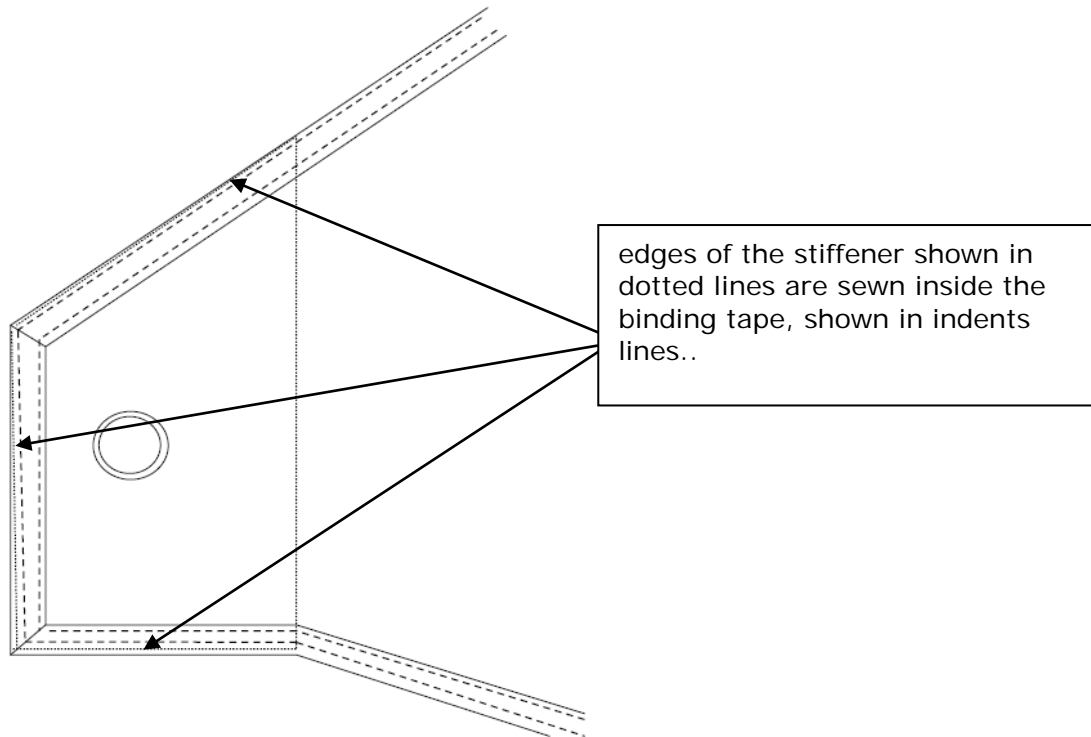
Hot-knife the ends of type 12 webbing flush with the edge of the container.



Resew the binding tape back into place.



Modification method 1 for construction type 2 :

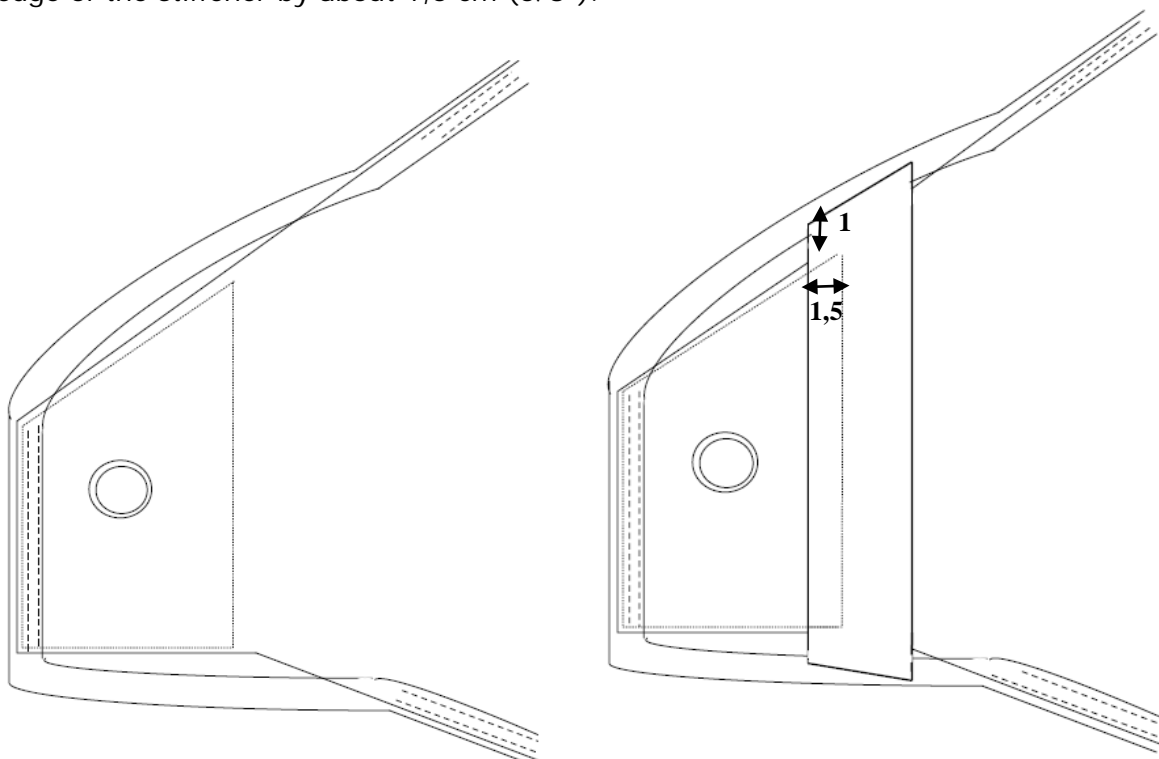


**Modification method 1.**

Remove the stitching from the binding tape for about 40-50mm (about 2") either side of the inner edge of the main side flap stiffener.

Mark a line on the inside of the flap, about 13mm or half inch outboard of the inside edge of main side flap stiffener.

Place a piece of **type 12** webbing on the inside of the flap, so that it overlaps the inner edge of the stiffener by about 1,5 cm (5/8").







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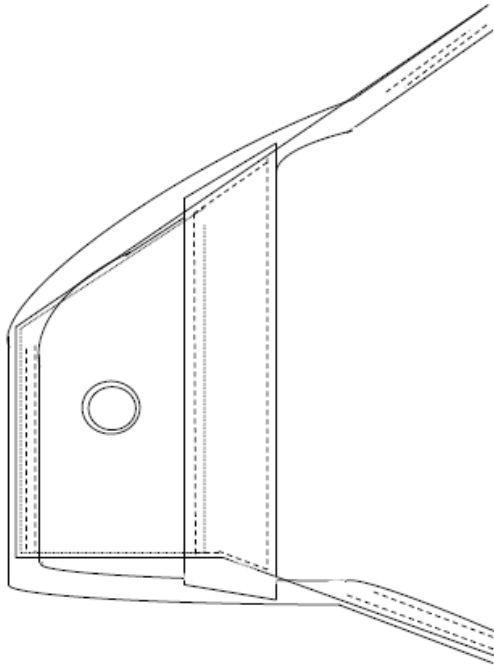
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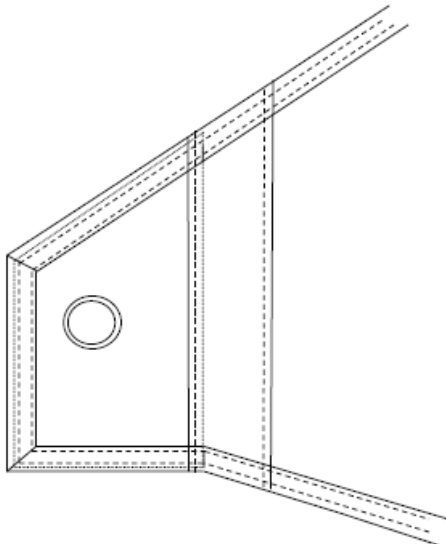
With a straight sewing machine, sew round type12 webbing 2mm (1/16") in from its edges and on its ends 2-4mm (1/16 - 1/8") in from the edge of the container fabric.



Hot-knife the ends of type 12 webbing flush with the edge of the container.



Resew the binding tape back into place.





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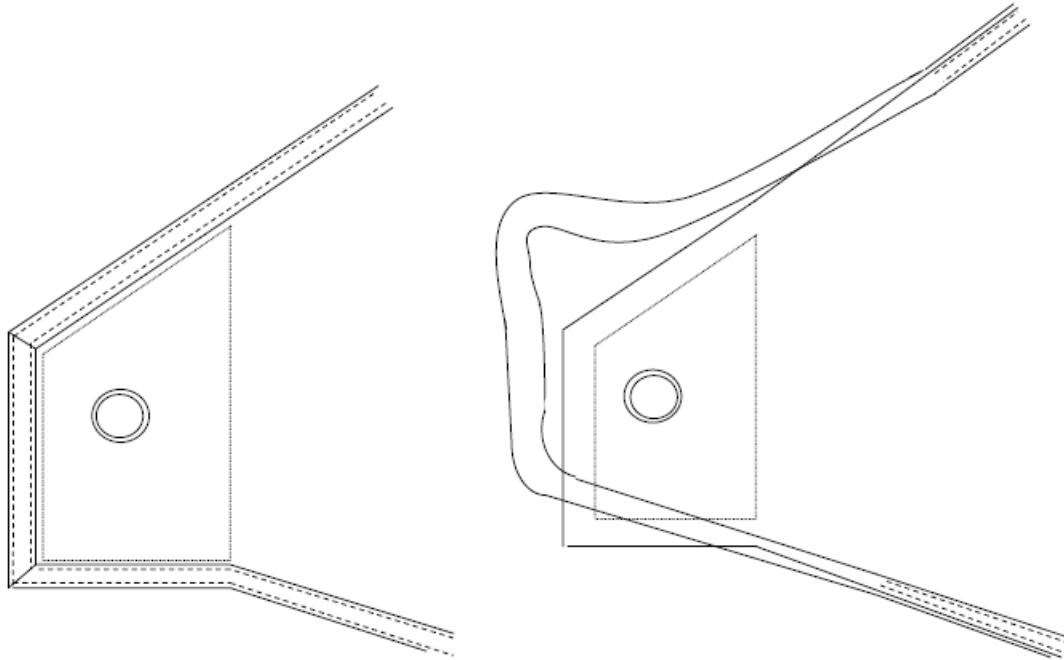
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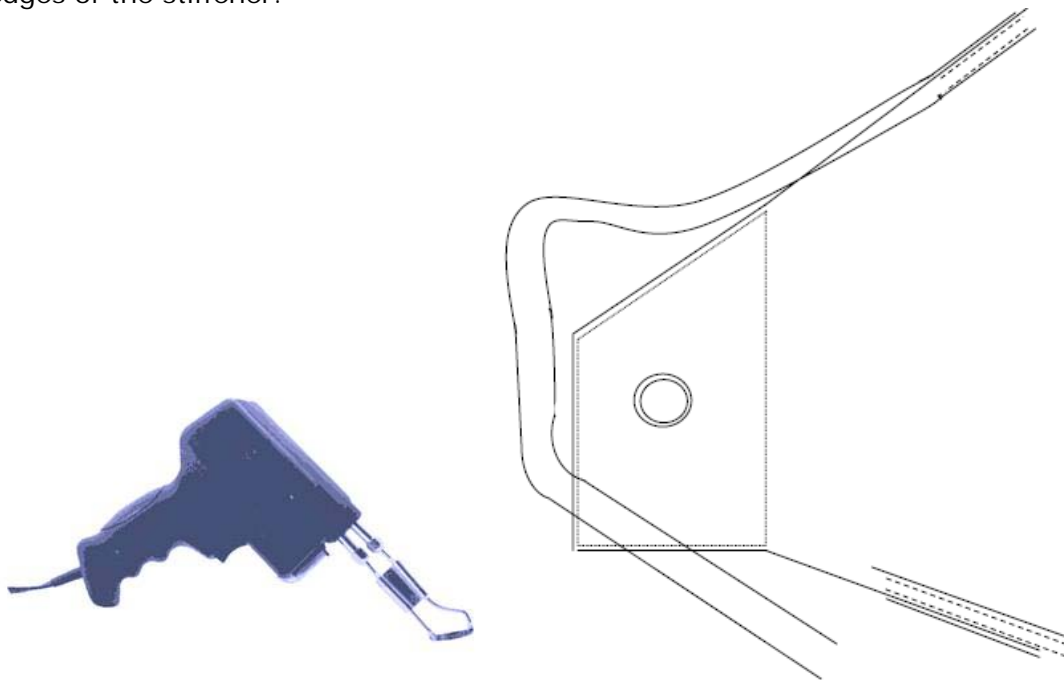
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**2) Method 2 for all rigs with this particular end of side flap type**, which show wear of the fabric covering the inner edge of the main side flap stiffener.

Remove the stitching from the binding tape all round the main side flap stiffener and up to 40-50 mm (about 2 ") inboard of its inner edge.



Use a hot-knife to cut the binding tape as far inboard as possible below the stiffener, then using the hot knife cut the excess fabric from around the stiffener so that it is flush with the exposed edges of the stiffener.





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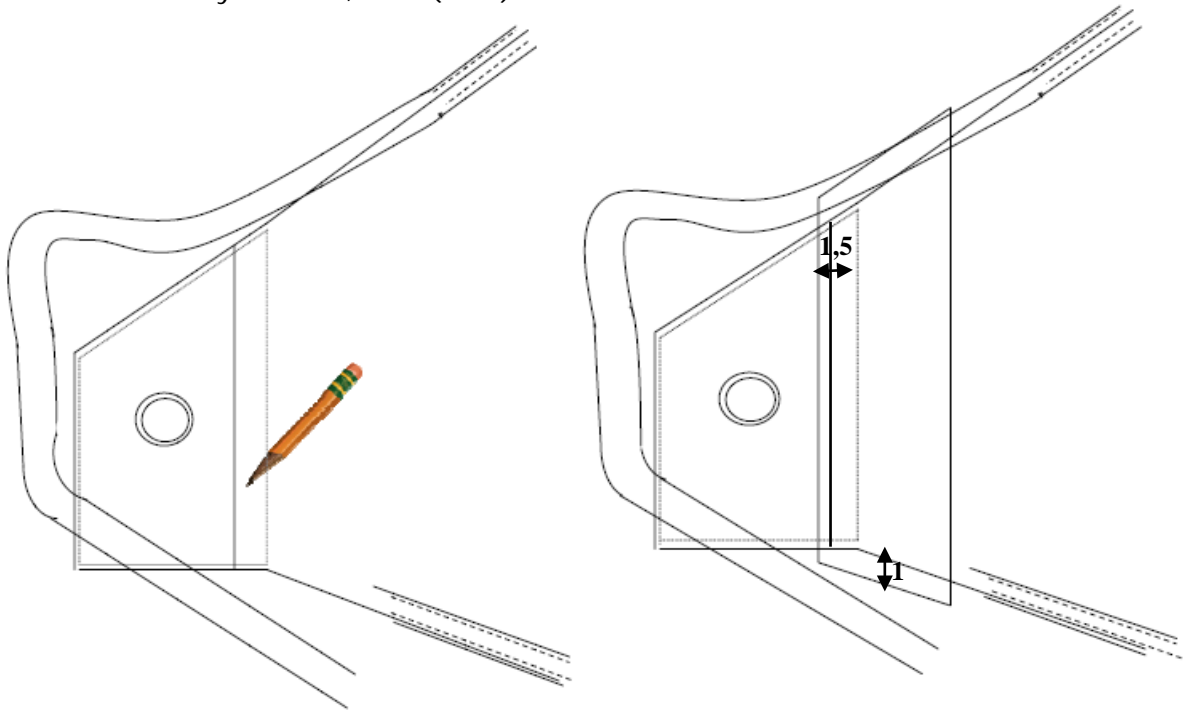
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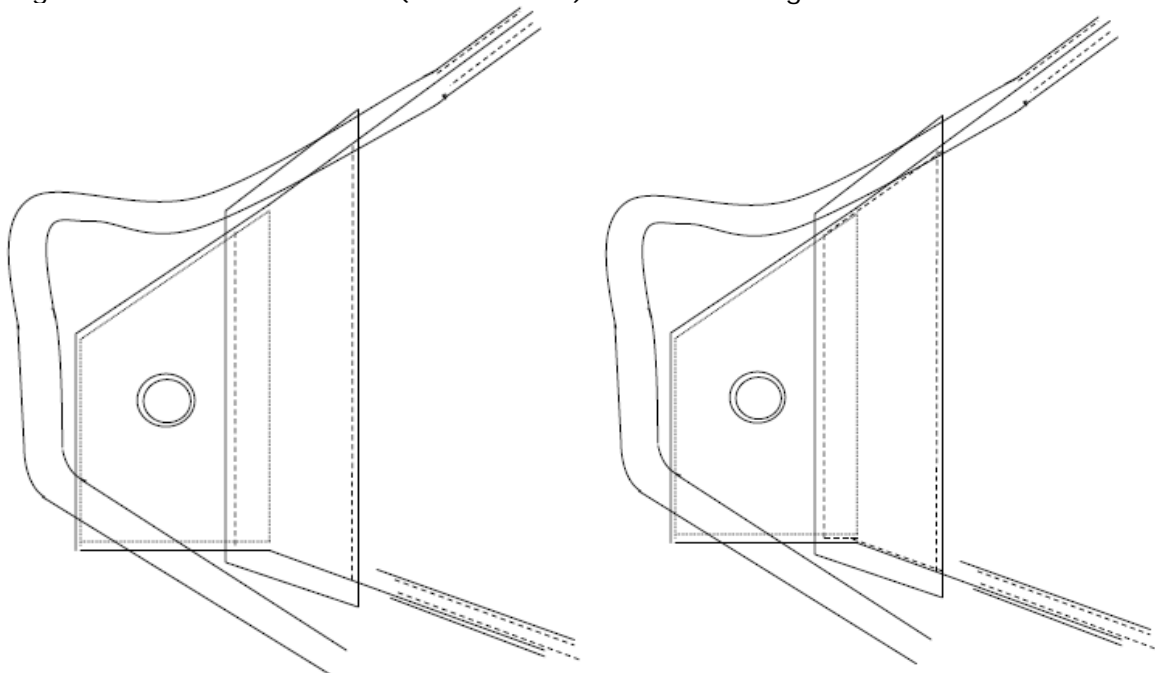
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Mark a line on the inside of the flap, about 1,3 cm (1/2") outboard of the inner edge of the stiffener.

Place a piece of **type 12** webbing on the inside of the flap, so that it overlaps the inner edge of the stiffener by about 1,5 cm (5/8").



With a straight stitch sewing machine, sew round type12 webbing 2mm (1/16") in from its edge and on its ends 2-4mm (1/16" - 1/8") in from the edge of the container fabric.





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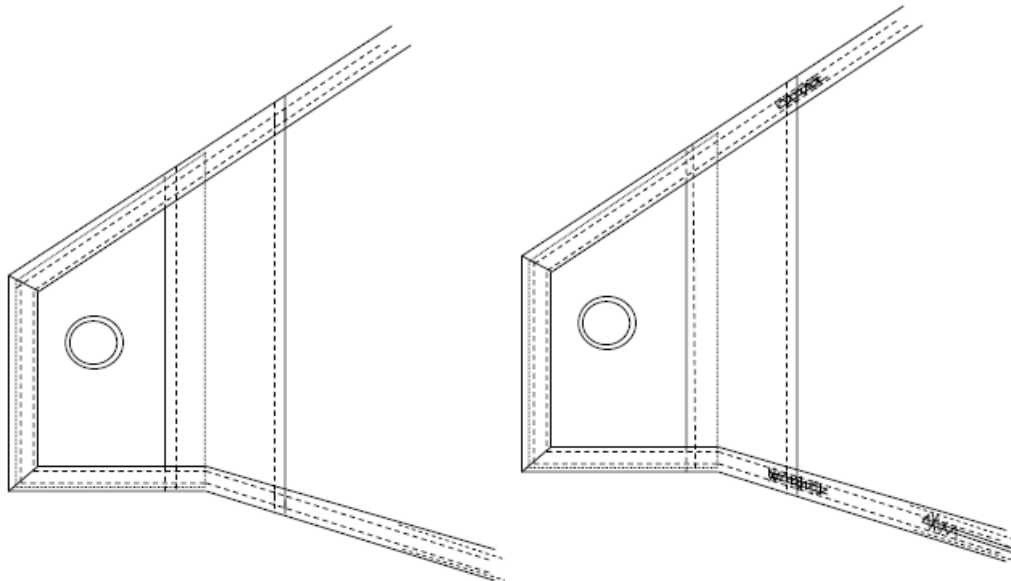
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Hot-knife the ends of the type 12 webbing flush with the new edges of the container.

Resew the binding tape back into place, through the stiffener and overlap the cut ends of the binding tape by 15mm (5/8")



Zig-zag or bartack the junctions between the ends of the binding tape and each outside corner of the stiffener.



**PACKING REMINDER AND RECOMMENDATIONS** : to reduce the probability this incident occurring:

- Use only correct sized rubber bands.
- Replace all rubber bands after 120 days, 50 jumps or when they become weakened or stretched.
- Do not have more than 40 centimetres ( 2 feet and 4 inches) of free lines inside the bottom of the pack tray.
- Always stow the excess brake line on the riser in the set up provided for it.

**AVOID PLACING THE DEPLOYMENT BAG VERTICALLY IN THE PACK TRAY and THEN ROTATE IT INTO THE HORIZONTAL DURING THE MAIN CLOSING SEQUENCE.** This action disturbs the free lines in the bottom of the pack tray.

Maintain a horizontal stable body position during the opening sequence.

**qualified staff:**

- Senior and Master Riggers to identification
- List of Master riggers in France allowed to : société Skyspirit au Luc (83) ; société Toutazimut SARL à Chimilin (38), Fabrice Ballanger à Nercillac (17) ; Skybluesport (Jacko) ; Agressif (Willy Vantomme) ou Flyourbody (Stéphane Zunino) à Tallard (05) ; Kevin Hardwick



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à Tallard ; Daniel Saillant à Nantes (44) ; « X-Tribe® Parachutisme\_Arnaud Cordebar » ; Hervé Joseph à Vannes (56) ; Alain Labattut (Loire Atlantique) ; Vincent Dumont à Verberie (60) ; Philippe Reffet (Pontpoint) ; José Cevalte ou Bernard Mesplede à Pau ; Eric Weiss à Orléans ; Philippe Piqueray à Maubeuge ; Pierre Auvray à Chalon ; Vincent David à Agen, Pascal Ghriss à Tarbes ; Sylvain Gravillon en Guadeloupe ; Olivier Seigneur (Nouvelle Calédonie).

**For additional riggers contact Eric Fradet.**

**Compliance date:**

- Before the next jump if the fabric over the stiffener is showing signs of wear.
- At next reserve repack if the fabric is not wearing.
- 

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